

Remarks

Claims 1-21 are in the application. Claims 1 and 17 are in independent form. Reconsideration is requested.

Applicant submits six sheets of replacement formal drawings as a precaution. The bottom margins are partly obscured on some sheets of the file copies of applicant's attorney. In addition, Fig. 11 has been revised to indicate that it shows "prior art." Paragraph [0010] of the application has been amended to correctly reference Fig. 11.

The Examiner has required restriction under 35 U.S.C. 121 to one of the following inventions:

- I. Claims 1-11
- II. Claims 12-16
- III. Claims 17-21

Claims 1-11 have been elected with traverse. Claims 12-21 have been withdrawn from consideration. Applicant responds as follows.

As noted by the Examiner, withdrawn process claims that depend from or include all the limitations of an elected product claim will be rejoined under MPEP 821.04 upon allowance of the elected product claim. Process claims 12-16 of unelected Group II depend from the elected product claims of Group I and, therefore, include all the limitations of at least claim 1 of Group I. Moreover, applicant notes that independent claim 17 of Group II includes all the limitations of at least claim 1 of Group I. Table 1 below identifies for each feature recited in claim 1 the corresponding feature recited in claim 17.

Table 1

Claim 1	Claim 17
<p>In a semiconductor element (A) formed with a semiconductor substrate (B) for detecting organic molecules (C), the semiconductor element having a photoelectric converter (D) and an organic molecule probe disposition region (E), the improvement comprising:</p> <p>the photoelectric converter being disposed on a first main side of the semiconductor substrate (F) and an organic molecule probe disposition region being disposed on a second main side of the semiconductor substrate (G).</p>	<p>A method of manufacturing semiconductor device (A) for detecting organic molecules (C), comprising:</p> <p>forming on a semiconductor substrate (B) a plurality of photoelectric converters (D) disposed on a first main side of the semiconductor substrate (F); and</p> <p>forming a plurality of organic molecule probe disposition regions (E) on a second main side (G) in alignment with the photoelectric converters.</p>

On a feature-by-feature basis, claim 17 recites each of the elements of claim 1 as indicated in Table 2.

Table 2

Feature	Claim 1	Claim 17
A	A semiconductor element	A method of manufacturing semiconductor device
B	formed with a semiconductor substrate	forming on a semiconductor substrate
C	for detecting organic molecules	for detecting organic molecules, comprising:
D	the semiconductor element having a photoelectric converter	a plurality of photoelectric converters
E	and an organic molecule probe disposition region), the improvement comprising:	forming a plurality of organic molecule probe disposition regions
F	the photoelectric converter being disposed on a first main side of the semiconductor substrate	a plurality of photoelectric converters disposed on a first main side of the semiconductor substrate
G	and an organic molecule probe disposition region being disposed on a second main side of the semiconductor substrate	forming a plurality of organic molecule probe disposition regions on a second main side in alignment with the photoelectric converters

Accordingly, applicant submits that withdrawn process claims 12-21 of Groups II and III depend from or include all the limitations of an elected product claim and so should be rejoined under MPEP 821.04 upon allowance of elected product claims.

The claim for priority from Japanese application no. 2000-399166 has been denied because no translation of the priority document has been provided. Applicant notes that no requirement for a translation had had been previously made and that no translation is warranted under 35 CFR 1.55 in the absence of an intervening prior art reference or an interference. Nevertheless, applicant encloses an accurate translation of the priority document and requests that the denial of the claim to priority be withdrawn.

Claims 3, 4, 6, 7, and 9 are rejected under 35 USC 112, second paragraph for indefiniteness. Claims 3 and 4 have been amended to recite that the semiconductor substrate has a thickness of about 10 to 20 μm , as described in the application at paragraph [0040]. Claim 6 has been amended to clarify the reference to the acronym "CCD." Applicant requests that this rejection be withdrawn.

Claims 1-11 stand rejected under 35 USC 102(b) for anticipation by Hollis et al. (U.S. Patent No. 5,846,708). The Examiner cites Hollis et al. as showing "a substrate having a side wherein recesses are for an organic molecule probe disposition region and the opposing side having a CCD region." Applicant responds as follows.

Applicant notes that claim 1 recites that the photoelectric converter and the organic molecule probe disposition region are disposed on respective first and second main sides of a semiconductor substrate. In contrast, Hollis et al. describes a photoelectric converter and an organic molecule probe disposition region as having a dielectric or polymer layer 216 between them, not a semiconductor substrate. Hollis et al. shows the photoelectric converter and the organic molecule probe disposition region as both being on the same (incident) side of a silicon wafer 212, not on opposite sides.

The present invention is directed to overcoming limitations in structures of the type disclosed by Hollis et al. The limitations include reduced aperture areas and possible contamination of the electronic devices by chemicals used to fix

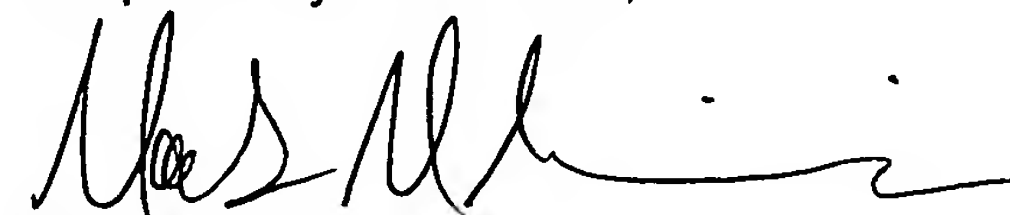
DNA probes on the incident side, as described in the application at paragraphs [0009]-[0014].

Applicant submits that Hollis et al. provides no teaching or suggestion of a photoelectric converter and an organic molecule probe disposition region that are disposed on respective first and second main sides of a semiconductor substrate. Rather, Hollis et al. would lead one skilled in the art away from such a structure by showing a photoelectric converter and organic molecule probe disposition region that are positioned together on the same side of a semiconductor wafer. The rejection is therefore improper because the cited reference does not teach each and every feature recited in the claims. Applicant requests that the rejection of claim 1 and its dependent claims 2-11 be withdrawn.

Applicant believes the application is in condition for allowance and respectfully requests the same.

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Respectfully Submitted,



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